

# LITTLE CROWS *CORVUS BENNETTI* ON THE COASTAL PLAIN OF SOUTH-WESTERN AUSTRALIA

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The first mention of crows in Perth was made by D.L. Serventy in one of his earliest papers (Serventy 1928). He described the movements of crows he had recorded when he lived at Maddington prior to 1923. First noticed in 1919, thereafter his records for 1920, 1921 and 1922 showed a similar movement south starting in December and continuing through January, gradually changing to a northerly movement during the rest of the summer. After Serventy left Maddington these records ceased.

In the first edition of Serventy and Whittell's *Birds of Western Australia* (1948) there was no mention of Little Crows in the south-west. However in the fourth edition (1967) they were recorded 'seasonally visiting the south-west' (p.423) and were clearly recognised as *C. bennetti* after Angus Robinson had trapped and banded nine individuals on his farm at Coolup, 85 km south of Perth on 14 December 1961. By then Serventy had obviously realised that the 'crows' of his earlier paper were not Australian Crows *C. ornatus* but Little Crows *C. bennetti*.

In 1969 I was transferred to Perth after completing a ten year study of the interactions of corvids and flocks of lambing sheep for the Wildlife Division of CSIRO (Rowley 1970a). From that work it was recognised that there were

five different species of Australian *Corvus* (Rowley 1970b). In consequence I and my assistants were not only interested in the corvids around us at our new base in Helena Valley but we were familiar with their identification and soon became interested in the flocks of Little Crows that passed over us; we made the following observations during the summers of 1971-1974:

1970-71: 6 Dec, 17 Little Crows; 26 Dec, 187; 18 Jan, 17; 11 Feb, 40.

1971-72: 19 Dec, 29; 21 Feb, 40; 24 Feb, 100; 26 Feb, 60; 1 Mar, 36.

1972-73: 4 Dec, c. 30; 7 Dec, c. 300; 25 Dec, c. 20; 29 Dec, 19; 17 Jan, c. 300; 30 Jan, 150; 2 Feb, 230; 25 Feb, 60; 6 Mar, c.150; 15 Mar, c.200; 18 Apr, c.300.

1973-74: 5 Jan, heard; 8 Jan, c.100.

After this we saw no more Little Crows over Helena Valley but on 18 March 1977 Susan Tingay told me that she had seen c. 200 Little Crows flying over Stoneville circling on their way south and on 25 March 1987 Rod Smith saw seven Little Crows over Gooseberry Hill (Smith 1987).

Since then Little Crows have not been reliably seen in Perth and none have been reported on the Suburban Bird Survey of the WA group of Birds Australia (C. Nealon, pers. comm.). It is interesting that Jim Masters commented

that Little Crows on migration in the Avon Valley (upper reaches of the Swan River that leads to Perth) have decreased markedly in the past 20 years' (*in litt.* quoted in Saunders and Ingram 1995). This was the period that the species had ceased to visit Perth.

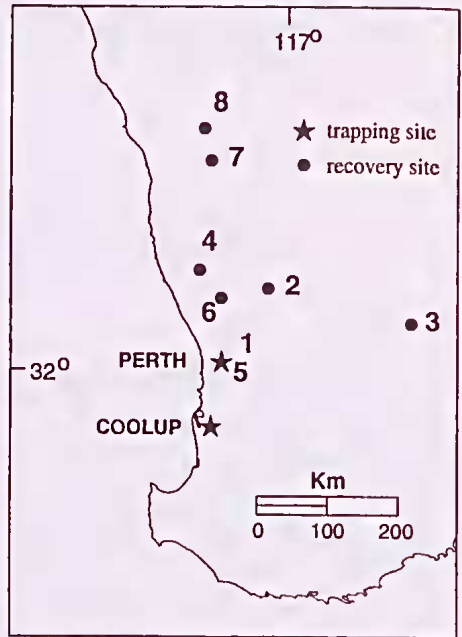
In January 1972 we started to operate two crow traps on the holding paddocks serving the abattoir at Midland which had been operating since 1915. We caught and banded the following Little Crows (aged by eye colour; Rowley 1970b):

Table 1. Numbers of Little Crows *Corvus bennetti* banded at Midland, Western Australia.

Year	Adult	Immature	Juvenile	Total
1972	4	5	27	36
1973	22	39	81	142
1974	8	5	31	44
Total	34	49	139	222

Eight of these bands were returned as detailed in Table 2, a return rate of 3.6%. The movements involved are shown in Figure 1.

Why Little Crows have altered a longstanding movement pattern is still a mystery, possibly due to the closure of



the abattoirs in the late 1970s or just a feature of the behaviour of a renownedly nomadic, opportunistic species?

I thank Graeme Chapman and Les Moore for their help in banding the crows and Lesley Brooker for drawing the map.

Table 2. Movements of banded Little Crows *Corvus bennetti* in Western Australia.

Site on map	Band number (090)	Age	Date banded	Date of recovery	Interval: months	Location of recovery	Distance (km)	Direction
1	49260	J	12/1/73	7/3/73	c. 2	Millendon	12	N
2	49271	J	15/1/73	7/3/73	c. 2	Wongan Hills	110	NNE
3	49279	I	15/1/73	22/7/73	6	Bodallin	276	E
4	49281	J	15/1/73	6/1/81	96	Dandaragan	140	N
5	46113	A	22/1/73	30/3/73	2	Banding site	-	-
6	46118	A	22/1/73	8/4/80	86	Mogumber	97	N
7	60707	A	25/1/74	18/12/78	59	Morawa	300	N
8	60742	J	1/3/74	9/7/74	4	Tardon	350	N

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# NOTES ON THE EGGS AND BURROWS OF TWO SPECIES OF DRAGON LIZARDS (*LOPHOGNATHUS LONGIROSTRIS* AND *LOPHOGNATHUS GILBERTI*)

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Discovering details about the breeding behaviour of reptiles in the wild is largely fortuitous. It requires an observer to be in the right place at the right time and then be diligent enough to make observations, often over many months. These prerequisites are not often met, so it is not surprising that there is a dearth of information about the breeding biology of many Australian reptiles. Some of these deficiencies can be circumvented by examining museum specimens but there is no substitute for observers 'on the ground' when it comes to learning about things like burrow construction and egg deposition.

In January 1999 I received data on burrow construction and egg deposition by two species of agamid lizard, *Lophognathus longirostris* and *Lophognathus gilberti*. What little there is known about clutch size in these two species is summarised by Greer (1989).

## NOTES ON *LOPHOGNATHUS LONGIROSTRIS*

In January 1999 I received a phone call from Sarah Willis in South Hedland telling me she had a 'tata' lizard burrowing in her garden. Although both *Lophognathus longirostris* and *Lophognathus gilberti* occur along the Pilbara coast I was convinced, by Sarah's answers to some questions, that

the lizard in her garden was *Lophognathus longirostris*.

I suggested she keep notes on any developments and let me know what happened.

Sarah's notes, which I received in March 1999, are as follows:

"1 January 1999

A small lizard, known to the locals as 'tata lizard' in Port Hedland, seems to have set up its territory in the front garden bed with the native hibiscus. The lizard (very originally christened 'Godzilla') is about 300 mm long, with about 130mm of that being body. He has two white stripes down each side. His territory seems to comprise of the front garden bed, the front lawn and the front fence - an area about 2 x 4 m<sup>2</sup>.

He has dug a burrow in the middle of the flower bed - this is about 3cm long and has an oval-shaped entrance, about 1 cm high in the middle.

His hunting ground seems to be mainly the hibiscus bushes, and the front verandah where a lot of insects get caught in the cyclone screens or old spider's webs. He has ventured up to the glass window (it runs all the way to the floor) but I don't know if it's his reflection he can see or movement behind the window, although he does put his head on the side if I or one of the cats moves behind the window. He

seems to be very curious about the window - often sitting in front of it for a long time.

31 January 1999

Godzilla observed digging in, then scratching sand over the top of his burrow. I suspect now that it may be a "her". This continued for about 15 minutes, and there was no sign that there had ever been a burrow there. A second one has been dug about 40cm away to the left of the old one.

2 February 1999

After ringing the WA Museum and speaking to Laurie Smith, I very carefully excavated the burrow to see if there were any eggs. About 18cm down into the soil, I found 4 eggs, off-white in colour with a rosette-type pattern on the shell, and about 1.5cm, in length. The sand was quite hot, but I forgot to take a temperature reading. I covered the eggs back up and marked the spot. The burrow appeared to be quite steep - approx a 45 degree angle.

3 February 1999

I wonder if the eggs will hatch - it rained last night, although not heavily.

4 February 1999

I rang Laurie at the Museum today to see if there was any way to protect the eggs - it appears not! Survival of the fittest, I suppose. It rained fairly heavily early this morning, and it appears that there is more on the way as there is a tropical low off the coast.

The lizards are known as 'nundulbury' in the Western desert language (Jigalong) and are apparently good to eat. I haven't seen Godzilla around - she's probably sheltering from the heavy rain.

6 February 1999

Godzilla was sitting in the middle of the driveway - probably warming herself. It has been raining again and the ground appears wet to a depth of about 10cm. Hopefully this hasn't harmed the eggs. There are lots of flying insects around, so there is plenty of food.

7 February 1999

The eggs should hatch between 6 - 8 weeks. It has rained again.

21 February 1999

There has not been a lot of activity in Godzilla's territory - we have had some absolutely torrential rain and the ground is extremely saturated. I doubt very much whether the eggs will hatch now, and they will have been in wet pindan clay for about 14 days. The baby lizards will have extreme difficulty getting to the surface as it sets very hard. The other burrow has also been washed away with the rain as well.

11 March 1999

There has been no sign of Godzilla in her territory - I can only assume that something happened to her during one of the really bad storms that have happened over the last few weeks. The water has been pooling in the yard, so she's probably gone off to higher ground. I can only hope that she returns soon."

#### NOTES ON *LOPHOGNATHUS* GILBERTI

In January 1999 I received a visit from Joe Smith, a regular contributor of information and supporter of the Department of Terrestrial Vertebrates for more than 30 years. Among some notes he gave me were details of two

*Lophognathus gilberti* laying eggs on the Drysdale River near Old Barton Plains homestead. Joe's notes are as follows:

"December 23, 1975

*Physignathus* [*Lophognathus*] observed digging a hole. Watched it progress over 6 hours. After laying its eggs she covered the hole in and camouflaged the entrance. On 20/2/1976 nine eggs hatched at five minute intervals.

December 25, 1975

Another *Physignathus* [*Lophognathus*] dug a hole yesterday and covered the

entrance. Today, I dug into the hole and only 6 inches in there were seven eggs. They all hatched on 26/2/76."

A small sketch by Joe shows the burrow dug into a slight incline at an angle of about 20° to the surface, the short tunnel with an enlarged egg chamber.

#### REFERENCE

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